

**Claims**

1. A multivalent F<sub>v</sub> antibody construct having at least four variable domains which are linked with one another via the peptide linkers 1, 2 and 3.
2. The F<sub>v</sub> antibody construct according to claim 1, wherein the peptide linkers 1 and 3 have 0 to 10 amino acids.
3. The F<sub>v</sub> antibody construct according to claim 2, wherein the peptide linkers 1 and 3 have the amino acid sequence GG.
4. The F<sub>v</sub> antibody construct according to any of claims 1 to 3, wherein the F<sub>v</sub> antibody construct is bivalent.
5. The F<sub>v</sub> antibody construct according to claim 4, wherein the peptide linker 2 has 11 to 20 amino acids.
6. The F<sub>v</sub> antibody construct according to claim 4 or 5, wherein the peptide linker 2 has the amino acid sequence (G<sub>4</sub>S)<sub>4</sub>.
7. The F<sub>v</sub> antibody construct according to any of claims 1 to 3, wherein the F<sub>v</sub> antibody construct is tetravalent.
8. The F<sub>v</sub> antibody construct according to claim 7, wherein the peptide linker 2 has 3 to 10 amino acids.
9. The F<sub>v</sub> antibody construct according to claim 7 or 8, wherein the peptide linker 2 comprises the amino acid sequence GGPGS.
10. The F<sub>v</sub> antibody construct according to any of claims 1 to 9, wherein the F<sub>v</sub> antibody construct is multispecific.

10. The  $F_v$  antibody construct according to any of claims 1 to 9, wherein the  $F_v$  antibody construct is multispecific.
11.  $F_v$  antibody construct according to claim 10, wherein the  $F_v$  antibody construct is bispecific.
12. The  $F_v$  antibody construct according to any of claims 1 to 9, wherein the  $F_v$  antibody construct is monospecific.
13. A method of producing the multivalent  $F_v$  antibody construct according to any of claims 1 to 12, wherein DNAs coding for the peptide linkers 1, 2 and 3 are ligated with DNAs coding for the four variable domains of an  $F_v$  antibody construct such that the peptide linkers link the variable domains with one another and the resulting DNA molecule is expressed in an expression plasmid.
14. Expression plasmid coding for the multivalent  $F_v$  antibody construct according to any of claims 1 to 12.
15. The expression plasmid according to claim 14, namely pDISC3x19-LL.
16. The expression plasmid according to claim 14, namely pDISC3x19-SL.
17. The expression plasmid according to claim 14, namely pPIC-DISC-LL.
18. The expression plasmid according to claim 14, namely pPIC-DISC-SL.
19. The expression plasmid according to claim 14, namely pDISC5-LL.

20. The expression plasmid according to claim 14, namely pDISC6-SL.
21. Use of the multivalent F<sub>v</sub> antibody construct according to any of claims 1 to 12 for the diagnosis and/or treatment of diseases.
22. Use according to claim 21, wherein the diseases are viral, bacterial or tumoral diseases.